



# National Transportation Safety Board

## Road to Zero Welcoming Remarks

Robert Sumwalt

# NTSB Most Wanted List

- Eliminate Distractions
- Require Medical Fitness
- Expand Recorders Use to Enhance Safety
- Reduce Fatigue-Related Accidents/Crashes
- End Alcohol and Other Drug Impairment



- Increase Implementation of Collision Avoidance Technologies
- Strengthen Occupant Protection
- Ensure the Safe Shipment of Hazardous Materials
- Improve Rail Transit Safety Oversight
- Prevent Loss of Control In Flight In General Aviation

**More than 95% of transportation fatalities occur on our nation's roadways.**



**NTSB**

# NTSB Speeding Study



- From 2005 – 2014, speeding related crashes accounted for over 112,000 fatalities.
- That's around 31% of all traffic fatalities.



NTSB



# Special Investigation Report: Selective Issues in School Bus Transportation Safety



Baltimore, MD  
November 1, 2016



Chattanooga, TN  
November 21, 2016



**NTSB**

# Safety Issues Discussed

- Medically unfit driver
- CDL fraud
- Speeding
- Cell phone use while driving
- Oversight by school district and contracted student transportation service providers
- Forward collision avoidance systems with AEB
- Electronic stability control systems
- Lap/shoulder belts



# NTSB Finding

“Properly worn lap/shoulder belts provide the highest level of protection for school bus passengers in all crash scenarios, including frontal, side, and rear impacts – and rollovers.”





“Kids grow up being belted in three-point belts in cars. It’s high time that they have the same safety afforded to them on school buses.”



NTSB



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## **Occupant Kinematics Simulation Lap Belt Simulation**

School Bus and Roll-Off Truck Collision at Intersection

Near Chesterfield, New Jersey

February 16, 2012

HWY12MH007



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**Occupant Kinematics Simulation**

**Lap/Shoulder Belt Comparison Simulation**

School Bus and Truck Tractor Semi-Trailer  
Collision at Intersection

Near Port Saint Lucie, Florida  
March 26, 2012

HWY12FH008

# Loxley, AL

March 13, 2018







# Las Vegas, NV

November 8, 2017



# Tempe, AZ

March 18, 2018

- March 18, 2018
- 9:58 p.m.
- Uber test vehicle based on Volvo XC90
- Self-driving system in computer control mode





# Mountain View, CA

March 23, 2018

- Auto Pilot engaged
- Tesla high voltage battery reignited
  - 11 am day of crash (1.5 hours after crash)
  - 1:30 pm day of crash
  - 4 pm day of crash
  - 7:30 pm, 5 days after crash



# Ft. Lauderdale, FL

May 8, 2018

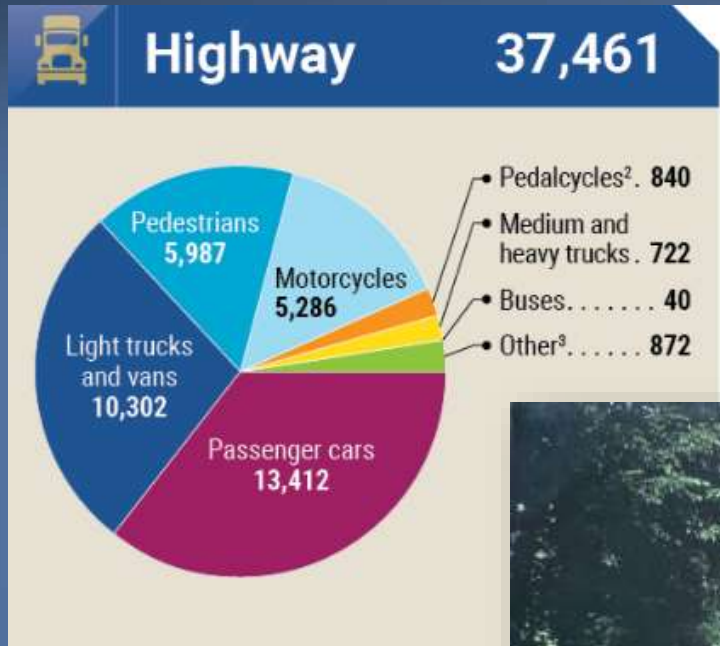


# Potential Safety Issues

- Human monitoring of automated systems
- Human-machine interface
- Federal and state policies on automated vehicle testing
- Re-ignition of lithium ion batteries at the scene and in the storage yard
- Emergency response protocols for lithium ion batteries
- Tow operations and storage of vehicles with lithium ion batteries



# Vulnerable Road Users







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